

## Non-CO<sub>2</sub> Greenhouse Gases: Methane

**Source/Sectors:** Wastes/Landfills

**Technology:** Mechanical biological treatment (A.5.1.5)

### Description of the Technology:

Landfills are the largest anthropogenic source of methane emissions in the United States. Key reduction options for methane emissions from landfills are reduction of the amount of organics deposited into landfills, and energetic use or flaring of landfill gas (Lucas *et al.*, 2006).

In this option, the whole waste stream is composted in order to degrade the organic fraction anaerobically. The inorganic fraction needs to be disposed of in a landfill (USEPA 2003; IEA, 2003).

**Effectiveness:** Good

**Implementability:** Fair

**Reliability:** Fair

**Maturity:** Fair

**Environmental Benefits:** It reduces methane emissions.

### Cost Effectiveness:

Technology	Lifetime (yrs)	MP (%)	RE (%)	TA (%)	Capital cost	Annual cost	Benefits
Mechanical biological treatment <sup>1</sup>	15	-	95	100	\$359.02	\$121.23	\$0.00

Note: MP: market penetration; RE: reduction efficiency; TA: technical applicability; costs are in year 2000 US\$/MT<sub>CO<sub>2</sub>-Eq.</sub>

1: IEA (2003) & USEPA (2004)

**Industry Acceptance Level:** Fair

**Limitations:** Capital and O&M costs are very high.

### Sources of Information:

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